

Environmental Services

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May 13, 1992

Ms. Cheryl Smith
U.S. EPA Region IV
Superfund Branch
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: Work Assignment No. C04054 - Olin Chemical Corporation

Technical Review of the Preliminary Site Characterization Summary

Document Control No. C04054-OC-TR-002

Dear Ms. Smith:

Dynamac Corporation is pleased to present you with PRC's Technical Review of the Preliminary Site Characterization Summary prepared by Woodward-Clyde Consultants, as consultant to Olin Corporation. A diskette copy of the comments is enclosed for your convenience.

If you have any questions or comments, do not hesitate to contact Gilda Knowles or me at (404) 681-0933.

Sincerely,

DYNAMAC CORPORATION

David L. Rusker Regional Manager

DLR/vj

Enclosures

cc: Ken Meyer, EPA Region IV Project Officer (w/o encl.)

Steve Kale, Dynamac TES Program, Manager

Gilda Knowles, Dynamac Work Assignment Manager

TES WA File

TECHNICAL REVIEW COMMENTS PRELIMINARY SITE CHARACTERIZATION SUMMARY OLIN CORPORATION, McINTOSH, ALABAMA PREPARED BY WOODWARD-CLYDE CONSULTANTS APRIL 1992

PRC Environmental Management, Inc. (PRC), under U.S. Environmental Protection Agency (EPA) Contract No. 68-W9-0005, performed a technical review of the Preliminary Site Characterization Summary (PSCS) for the Olin Corporation, McIntosh, Alabama site. Woodward-Clyde Consultants, Inc. prepared the PSCS for Olin Corporation. The PSCS includes (1) a comprehensive description of all the site characterization activities and results, and (2) interpretations regarding potential contaminant sources and the nature and extent of contamination. Olin Corporation submitted this PSCS to EPA for review. Olin Corporation will incorporate EPA's comments into a draft remedial investigation (RI) report and will perform corrective actions pursuant to the Administrative Order on Consent (AOC), EPA docket number 90-13-C.

PRC reviewed this PSCS according to (1) the requirements set forth in the AOC; (2) the objectives and methodologies outlined in the RI/FS Project Plan, May 1991; (3) additional sampling objectives presented in the draft Revised Sampling and Analysis Plan (SAP), April 1992; (4) EPA's Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (EPA/540/G-89/004, October 1988); and (5) EPA's Standard Operating Procedures and Quality Assurance Manual (SOPQAM), February 1991. Additional references cited in the text are listed at the end of the document.

After reviewing the PSCS, PRC has determined that the PSCS adequately presents site data collected to date. However, PRC found technical deficiencies in several sections of the PSCS that will require Olin to correct or explain the deficiencies. In addition, PRC recommends that additional sampling be performed during Phase III sampling activities. PRC recommends EPA review the technical review comments for both the Revised SAP and PSCS before approving Phase III sampling activities.

GENERAL COMMENTS

- 1. The PSCS contains many grammatical and typographical errors. The document should be edited by Woodward-Clyde.
- 2. The PSCS lacks information on background levels for ground water, surface water and sediment. To adequately assess the levels of contamination presented in the PSCS, comparative background samples are necessary.

- 3. The units for analytical values presented in the text should be consistent throughout the document.
- 4. The PSCS should clearly present in a table the maximum contaminant levels (MCLs), Primary Drinking Water Standards, and any additional health-based criteria used.
- 5. According to the EPA oversight contractor's logbook, Woodward-Clyde collected an off-site surface soil sample from a residential area on August 26, 1991. However, no mention of this sampling event is discussed in the document. A brief summary, including the purpose of the off-site sampling, should be presented in the PSCS.
- 6. Due to the detection of organic contaminants in Miocene aquifer wells, a ground-water sample should be obtained from well DH-2, which is screened in the Miocene upper confining unit (Tm1), to determine the confining capacity of the clay unit within the area of the former hazardous waste drum storage pad.
- 7. PRC recommends that sediment samples be collected in the Tombigbee River upstream and downstream of the Olin wastewater discharge point. Because the Tombigbee River and Olin's basin are contiguous for several months every year due to seasonal flooding, contaminants from the basin could migrate to the Tombigbee River.
- 8. According to historic aerial photographs of the basin (EPA 1983, p. 13), the former wastewater drainage ditch which carried wastewater from the facility to the basin was not a single channel but was composed of multiple channels that deposited deltaic sediments in the southeast portion of the basin. Although additional sediment sampling of the basin area has been proposed in the Revised SAP, the proposed grid sampling interval of approximately 400 feet is not acceptable. PRC recommends that the original grid sampling interval of 200 feet be used during Phase III OU-2 sampling activities.
- 9. The PSCS adequately summarizes information that has been gathered during the Phase I and II RI field activities. However, it appears that several important ecological aspects of OU-2 have not been addressed or described in sufficient detail. In order to provide adequate information needed for an ecological assessment of the OU-2, the following comments comments 10 through 12 should be addressed in the draft RI report.
- 10. The PSCS concludes that the sampling results indicate that most of the macroinvertebrate sampling stations do not support a diverse benthic community. In the absence of data collected from an appropriate reference or control site similar to OU-2, this interpretation is not justified.
- 11. The PSCS lists mercury as a primary contaminant of concern in the sediment. However, no mention of the availability of organic mercury, or methylmercury, is discussed in the text. Since methylmercury is more apt to bioconcentrate and biomagnify, it should be explained whether mercury concentrations in receptors, such as macroinvertebrates and fish, were measured as methylmercury or inorganic mercury. The U.S. Fish and Wildlife Service (1987) provides additional information on mercury.
- 12. The PSCS points to the existence of wetlands within OU-2. However, wetland ecological receptors have not been adequately described nor have any sediment samples been taken in a designated wetland. Because wetlands are important as valuable integrated biotopes and sensitive habitats, wetland ecological receptors in OU-2 and sediment contamination levels in identified wetlands should be described in more detail.

SPECIFIC COMMENTS

- 1. <u>Section 1.2.1, Page 3</u>. The text should include the dates each solid waste management unit (SWMU) was in operation, including date constructed and date closed.
- 2. <u>Section 1.2.1.1, Page 9.</u> The discussion on the weak brine pond should include a sentence stating that the pond is a potential source of mercury contamination to the ground water, as previously stated in the Executive Summary.
- 3. Section 1.2.12, Page 12, Paragraph 1. The document addresses proposed soil sampling of the two sanitary landfills, as presented in the Revised SAP. The proposed sampling strategy is to drill one soil boring at a randomly selected location between the two landfills. However, the proposed soil boring location might not be representative of the entire landfill area. Therefore, PRC recommends that a geophysical survey or statistical approach be used to enhance sampling location selection and to ensure that representative samples are collected.
- 4. Section 1.2.1.2, Page 13, Paragraph 1. From the description of the sanitary landfills on page 12, the text indicates that wastes containing hexachlorobenzene and mercury sludges might have been disposed of in the Old Plant (CPC) Landfill. The discussion of the Old Plant (CPC) Landfill should include this information.
 - Also, the Executive Summary, page ES-1, indicates that the present source of organic contamination in ground water is the Old Plant (CPC) Landfill. The text on page 13 should include this information.
- 5. <u>Section 1.2.1.2, Page 14, Paragraph 1.</u> The text should indicate the justification for determining that the lime ponds are not a suspected source of mercury contamination to ground water.
- 6. Section 2.1.2, Page 27, Paragraph 1. The eight wells from which water elevations were not obtained should be listed in the text. The wells that were dry should be noted along with their total depth and screen interval thickness and elevation. Also, the wells that had altered or obstructed surface casing and the wells that were not located in the heavily forested area should be listed.
- 7. Section 2.1.4, Page 32. A list of the 122 wells that were identified and surveyed should be included in the document, as well a justification for the 88 wells that were not sampled. The names and addresses of the domestic well owners, along with the depth and use of the wells, should be provided in a table containing the 34 domestic wells that were sampled. Also, completed well survey forms for each well identified should be included as an attachment to the document.
- 8. <u>Section 2.1.4, Page 33.</u> Based on information in the EPA oversight contractor's logbook, domestic well DW-24 was not sampled because the well was not used'for drinking water at the time of sampling. The text does not include this well on the list of wells not sampled.
- 9. <u>Section 2.1.4.</u> Page 34, Paragraph 3. The text states "no hoses, filters, or connective devices were used" in the collection of domestic well samples; however, the oversight contractor's logbook indicates that because an electrical outlet was located beneath the well spigot, well DW-32 was sampled using a common garden hose.
- 10. Section 2.1.4, Page 34, Paragraph 2. The acronym ESBSOP should be defined.

- 11. <u>Section 2.2.3.1, Page 34, Paragraph 4.</u> The text should reference specific samples by number as well as by location and description.
- 12. <u>Section 2.2.3, Page 34.</u> There is no reference to Figure 8, "OU-2 Sample Location Map" in this section. This figure should be mentioned in the first paragraph.
- 13. Section 2.2.4, Page 47. This section should reference Figure 8.
- 14. <u>Section 2.2.5, Page 48, Paragraph 3.</u> A brief description of the Releve method that was used for the vegetative stress study should be included in the text.
- 15. <u>Section 2.2.5, Page 50, Paragraph 3.</u> A definition of the Importance Percentage (IP) and its statistical significance should be included in the text.
- 16. <u>Section 2.2.5. Page 52, Item g.</u> The statement should be revised to reflect that manmade alterations can include fires, such as slash and burn or controlled fires.
- 17. Section 3.1, Page 58. The demographics and land use section presented in the text is cursory in relation to the amount of data available in Appendix B. The text should include a listing of population and well distribution by mile radius for the three-mile radius survey area.
 - Also, a discussion on the fishing habits of the nearby population should be included in the text. From field observations, evidence of fishing in the basin was documented. Because mercury was detected in fish tissue and has the potential to bioaccumulate, it is important to document in the text the frequency and extent of sustenance fishing. Additionally, there is no mention in the text of the McIntosh Landing fishing camp, a designated recreational area on the Tombigbee River that is located approximately 0.5 mile downstream of the basin.
- 18. Section 3.3.2, Page 61. The text discusses surface water runoff from the upland area, where the Olin facility is presently located. However, the text does not address the drainage area on the northeastern edge of the facility and east of the hydrazine storage area. From historic aerial photographs, the area channeled surface water from the facility, including the sanitary landfills, to a wetland located west of the basin, and eventually discharged to the current discharge ditch. Additional sampling is recommended in this area to determine the potential for contaminant migration from the facility area to the wetland.
- 19. <u>Section 3.3.2.</u>, Page 61, Paragraph 3. The extent of runoff from the northern boundary of the Olin property to the northern basins should be discussed in the text, as well as the drainage system that exists between the three basins.
 - The meaning of the last sentence of the paragraph is unclear; it should be revised.
- 20. <u>Section 3.5.2.</u>, Page 68, Paragraph 3. The text should state that the "interbedded white layers" observed in sample OD15 were identified by an Olin representative at the time of sampling as possibly a mixture of lime and polychloronitrobenzene (PCNB).
- 21. Section 3.6, Page 69, Paragraph 1. The water level data recorded for each of the 105 monitor wells, along with the screen interval elevations, should be listed in a table. This information is necessary for comparing water-table and hydraulic head elevations against the screen interval thickness and elevation to determine the accuracy of the potentiometric surface maps.

- 22. Section 3.6, Page 69, Paragraph 2. The data used to calculate the average hydraulic conductivity (K), average transmissivity, and specific yield should be listed in a table or appendix. Also, the method used to obtain the values for each well should be thoroughly described in the text. Also, determining these values from the loss of drilling fluid during monitoring well installation is not accurate. These values should be determined from slug tests and aquifer tests performed after well completion.
- 23. Section 3.6, Page 70, Paragraph 2. The October 1987 potentiometric surface data referenced in the report should also be shown in a figure as a means of comparing that data with more recent potentiometric surface data.
 - In addition, a "hydraulic high" is not the correct term; the correct term is ground-water divide or hydraulic mound.
- 24. <u>Section 3.6, Page 70, Paragraph 3.</u> Figures 17 and 18 should be referenced in the discussion on potentiometric surfaces. Also, the corrective action wells, as discussed in the text, are not indicated in Figures 17 or 18.
- 25. Section 3.6, Page 71, Paragraph 3. The ground-water divide discussed in the text is not depicted in Figure 17. The figure shows that ground-water flow on the eastern section of the facility appears to be primarily to the east towards the Tombigbee River, except within the capture zone of CA-4. Corrective action well CA-4 is not indicated on Figure 17. Figure 17 does not show CA-4 inducing flow from the river as stated in the text. However, Figure 19 does show wells CA-3 and CA-4 inducing flow from the Tombigbee River. The text or Figure 17 should be revised accordingly.
- 26. Section 3.6, Page 71, Paragraph 3, Last Sentence. The statement that the corrective action wells are effective at recovering ground-water migrating from any known past or current source is not completely correct, based on the data presented in Figure 17. Due to the lack of monitoring wells on the eastern portion of the facility and the fact that potentiometric contours have been inferred in this area, it is difficult to determine the ground-water flow from the sanitary landfills. Ground-water flow near the sanitary landfills located on the northern section of the facility is primarily to the southeast, based on the ground-water elevations shown for wells in the area (SL-4 and SL-3). Therefore, ground-water contamination from this area could possibly be flowing to the basin and the Tombigbee River and not towards corrective action well CA-3 as stated in the text.
- 27. Section 3.6, Page 72, Paragraph 1. Seasonal potentiometric maps for the upper zone of the Alluvial aquifer are presented in Figures 17 and 19. However, only September 1991 well data for the lower zone of the Alluvial aquifer is provided (Figure 18). Seasonal potentiometric data for the lower zone should be included in the document.
- 28. Section 3.7, Page 73, Paragraph 0. It should be stated clearly in the text whether those areas defined as "bottomland forest and herbaceous areas" are classified as wetlands.
- 29. Section 4.0, Page 76, Paragraph 2. The summary tables in Appendix F do not include analytical data for the inorganic contaminants in ground water, specifically mercury. This information should be included in Appendix F.
- 30. Section 4.1, Page 77. The document should state whether the ground-water data were obtained from RI sampling results or Resource Conservation and Recovery Act (RCRA) monitoring well data. The sources for all tables, figures, and relevant sampling data used in these discussions must be referenced. The text should also indicate where the relevant sampling data are located in the document.

- 31. Section 4.1.1, Page 78. Although Section 1.2.1.2, page 14 includes a discussion of mercury detected in ground water near the two lime ponds, no discussion is included in Section 4.1.1 regarding the lime ponds as potential sources of mercury contamination. Given the presence of mercury in ground water in this area, the lime ponds should also be a suspected source of mercury until proven otherwise.
- 32. Section 4.1.1, Page 78, Paragraph 0, last sentence. The sentence should clearly state that "contaminant concentrations" have been shown to vary between the upper and lower zones of the Alluvial aquifer.
- 33. Section 4.1.1, Page 78, Paragraph 2. The text states that wells were grouped together and evaluated to determine potential source areas. The document should clearly indicate, either in a table or a figure, which of the wells were used to assess ground-water contamination for each source area.
- 34. Section 4.1.1, Page 78, Paragraph 3. The text should reference the data that show slightly decreasing contaminant trends. In addition, from Table 9, monitoring well BR-7D, located on the southern side of the weak brine pond, shows mercury concentrations of 210.7 micrograms per liter $(\mu g/L)$ during the first quarter of 1991, and 259.1 $\mu g/L$ during the first quarter of 1992. The concentration appears to be increasing, not decreasing.
- 35. Section 4.1.1, Page 79, Paragraph 3. The text should state which monitoring wells are considered perimeter wells.
- 36. Section 4.1.1, Page 80, Paragraph 1. The text should list the west, south, east, and north plant wells. Also, the 1984 to 1988 monitoring well data discussed for well E-1 should be included in the document.
- 37. <u>Section 4.1.1, Page 80, Paragraph 3.</u> The text discusses time versus concentration curves for ground water data. The time versus concentrations curves should be included in the document.
- 38. Section 4.1.1, Page 80, Paragraph 4. The text indicates that elevated organic concentrations detected in well WP-6 are believed to be the result of a contaminant "slug" that originated from the early operations of the CPC Plant. This conclusion might not be accurate for the following reasons: 1) the direction of ground-water flow before installation of the corrective action wells near the CPC Plant was south-southeast. Therefore, contaminant slugs would not have migrated to the west towards the WP-6 well; 2) the present ground-water divide that runs north-south through the center of the Olin facility would inhibit the flow of contaminated ground water originating from the east and flowing towards the west.

In addition, the organic contamination detected in well WP-6 indicates that the capture zone induced by corrective action wells CA-1 and CA-2 is not controlling the migration of organic contaminants. Additional monitoring wells located near the lime ponds should be sampled to determine other potential sources of organic contamination.

- 39. Section 4.1.2, Page 81, Paragraph 1, last sentence. The low concentrations of contamination detected in the Miocene aquifer in the past should be discussed further. The text should include the location of the wells sampled, the contaminant type detected and concentration level.
- 40. Section 4.1.2.1, Page 82, Paragraph 1. From those wells shown in Figure 6, the text should include a list of wells sampled, either during RI or RCRA sampling, for determining additional wells that might need to be sampled to obtain additional site characterization data.

- 41. <u>Section 4.1.2.1, Page 83, Paragraph 3.</u> Monitor well PE-3D is listed as an upgradient well; however, the well is downgradient of the sanitary landfills. The text should clarify this.
- 42. Section 4.1.2.1, Page 83, Paragraph 4. The text states that the source of organics detected in monitoring wells BR7, BR7D, BR8, and MP13 is the westward migration of constituents from the Old Plant (CPC) Landfill. However, according to Figures 17, 18 and 19, present ground water flow on the east side of the facility near the landfill is east towards corrective action well CA-5. The above-mentioned monitoring wells are all located west and northwest of the Old Plant (CPC) Landfill, upgradient of the ground-water flow direction. Either the ground-water flow direction from the landfill is towards the northwest, or the source of organics is something other than the landfill.
- 43. Section 4.1.2.1, Page 84, Paragraph 2. The statement that a "slug" of organic contamination detected in the area of WP-6 is due to an early release of contaminants from the plant area to the east might not be plausible if the historical ground-water gradient is taken into account. The historical flow pattern was possibly west to east, therefore, it is difficult to determine if contaminants originating from the CPC Plant could migrate to the west, as suggested in the explanation for organic contamination at WP-6. The possibility that a contaminant source exists near WP-6 should be investigated.
- 44. <u>Section 4.1.2.1, Page 96, Paragraph 3.</u> The suspected source of the elevated concentrations of chloride, either natural brine seeps or other source areas, should be stated in the text.
- 45. <u>Section 4.1.2.2, Page 98, Paragraph 3</u>. The text should state why well PL-8D is not sampled every quarter.
- 46. Section 4.1.2.3, Page 101. The text should include the Primary Drinking Water Standards for compounds identified in domestic wells above detection limits for comparison with detected contaminant levels. For completeness, the Primary Drinking Water Standards for all compounds should be presented in a table.
- 47. <u>Section 4.1.2.4</u>, Page 105, Paragraph 1. For the purpose of determining the horizontal extent of contamination to the east, well BA1 should be sampled.
 - Also, the mercury concentration detected in well PL10S during RI sampling activities presented in Table 9 was $2.2 \,\mu g/L$, not $1.8 \,\mu g/L$ as the text indicates. The $1.8 \,\mu g/L$ mercury concentration was detected during second quarter 1991 RCRA sampling. This should be corrected in the text.
- 48. Section 4.1.2.4, Page 106. Paragraph 1. The text states that mercury was detected in offsite domestic well DW-40 at a concentration of $0.37 \mu g/L$. However, the previous paragraph states that the southern extent of the mercury plume appears to be controlled by corrective action well CA-5, based on well E-1 sampling results, which showed a mercury concentration of $0.23 \mu g/L$. The mercury concentration in domestic well DW-40 is higher than the E-1 concentration, indicating that the mercury plume might extend south beyond the mercury contours shown in Figure 23.
 - In addition, the domestic well concentrations for mercury and organics should be included in Figures 23 and 24, to indicate the ground-water contamination levels detected beyond the boundaries of the Olin facility.
- 49. <u>Section 4.1.2.4</u>, Page 107, Paragraph 1, Fourth Sentence. The sentence should be revised to read "Farther to the east . . ."

- 50. Section 4.2.5, Page 129. The text addresses field investigations performed in OU-2 but does not include the terrestrial vertebrate study performed by Dr. David H. Nelson. A subsection should be included discussing such topics as trophic relationships (food chain, food web) and biocommunity structure. Habitat requirements should be identified for threatened and endangered species that might live within the facility property boundary. A table similar to Table 20 should be provided that lists all threatened and endangered fauna residing within the facility boundary.
- 51. Section 4.2.5.1, Page 130, Paragraph 2. EPA guidance documents should be used, where applicable, for ecosystem classifications. The current wetland guidance document accepted by EPA is the 1989 Federal Manual for Identifying and Delineating Wetlands (Federal Interagency Committee for Wetland Delineation, 1989). The text should include the wetland indicators, including hydrophytic vegetation, hydric soils, and wetland hydrology, identified in OU-2. The wetland areas of OU-2 should be adequately addressed in the ecological assessment portion of the draft RI report.
- 52. <u>Section 4.2.5.1, Page 135, Paragraph 3</u>. The location of the active brine discharge canal should be indicated in a figure and referenced.
- 53. Section 4.3, Page 143, Paragraph 3. The extent of ground-water contamination in OU-2 has not been adequately defined. The quality of the surficial ground water discharging to the basin and Tombigbee River must be determined. Additional monitoring wells located on the eastern portion of the Olin property, such as wells PE-5 and PE-8, should be sampled.
- 54. <u>Section 5.0, Pages 145-148.</u> Several of the reference citations do not include publication information, such as publisher and publication number, necessary to obtain the reference cited.
- 55. Table 5. Well construction details for well PL-10D, which was sampled during the RI, are not listed as stated in Section 2.1.2, page 27, paragraph 2, sentence 3. This information should be provided. Also, the table should indicate whether the casing and screen for each well are made of PVC or stainless steel.
- 56. <u>Table 15. Hibiscus moscinate</u> and American Holly are misspelled in the table. These typographical errors should be corrected. Also, the common name for *Spirodela polyrhiza* is listed incorrectly. The correct common name is great duckweed.
- 57. Table 20. The table lists Federally Endangered and Threatened Species having similar habitats and whose range includes the McIntosh area. The "potential for occurrence" and "habitats" for Clematis socialis, Sagittaria secundifolia, and Trillium relinquim should be identified.
- 58. Figure 14. Boring logs for each well shown in the figure should be provided in Appendix A.
- 59. Figure 15. See comment 58.
- 60. Figure 17. The corrective action well data points should be included in the figure to justify the ground-water contours shown. Also, the ground-water elevation for monitoring well PE-5 has been omitted and should be included in the figure.
- 61. Figure 18. The corrective action well data points should be included in the figure to justify the ground-water contours shown. Also, the contours in the vicinity of well PE-11 are not accurate and should be re-drawn.

- 62. Appendix A. Boring logs are missing for wells BR-7, BR-7D, SL-2, SL-4, and WW-12. Borehole data from WW-12 and SL-4 were used to construct Figure 14, therefore this information presumably exists. Please provide the borehole data to complete the appendix.
- 63. Appendix E. A symbol should not be used to mean more than one thing in one appendix. The * is used in this appendix to mean both "Species predicted by Dr. David H. Nelson of the University of South Alabama likely to be common" and "Species observed during July and/or November sampling activities."
- 64. Appendix F. The summary tables containing sediment data should include sampling depth intervals for the core sample data reported.

References

- 1. U.S. EPA, 1991, Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual. U.S. EPA Region IV Environmental Services Division, Athens, Georgia (February 1).
- 2. U.S. EPA, 1990, Administrative Order By Consent for Remedial Investigation and Feasibility Study, EPA Docket No. 90-13-C (May).
- 3. Federal Interagency Committee for Wetland Delineation, 1989, Federal Manual for Identifying and Delineating Wetlands: An Interagency Cooperative Publication, 89-382-P (January 10).
- 4. U.S. EPA, 1988, Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA. Office of Remedial and Emergency Response, OSWER Directive 9355.3-01, EPA/540/G-89/004 (October).
- 5. U.S. Fish and Wildlife Service, 1987, Mercury Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review. Biological Report 85(1.10) (April).
- 6. U.S. EPA, Environmental Photographic Interpretation Center, 1983, Historical Analysis, Olin Chemical, McIntosh, Alabama. Environmental Monitoring Systems Laboratory, Office of Research and Development, Las Vegas, Nevada, TS-PIC-82047 (December).
- 7. Woodward-Clyde Consultants, Inc. 1992, Remedial Investigation and Feasibility Study Revised Sampling and Analysis Plan, McIntosh Plant Site, Olin Corporation, McIntosh, Alabama (April).
- 8. Woodward-Clyde Consultants, Inc. 1991, Remedial Investigation and Feasibility Study Work Plan, McIntosh Plant Site, Olin Corporation, McIntosh, Alabama (May).
- 9. Woodward-Clyde Consultants, Inc. 1991, Remedial Investigation and Feasibility Study Sample Analysis Plan, Volumes I and II, McIntosh Plant Site, Olin Corporation, McIntosh, Alabama (May).